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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,588	06/27/2003	Evgeny Polyakov	1725-US	8418

7590 04/04/2006

Teradyne, Inc.
Legal Department
321 Harrison Avenue
Boston, MA 02118

EXAMINER	
MAIS, MARK A	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,588	POLYAKOV, EVGENY	
	Examiner	Art Unit	
	Mark A. Mais	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Baker et al. (USP 6,266,700).

3. With regard to claims 1 and 20, Baker et al. discloses a method of communicating over a plurality of different target media **[the logic control module can perform a plurality of functions such as data manipulation, e.g., parsing, filtering, and analysis, col. 2, lines 50; logic control module 16 supports the configuration/reconfiguration of the programmably configurable protocol descriptions to handle different transmission hardware, protocols, and suites (in order to transmit or receive data over that different transmission hardware, protocol, or suite), col. 2, lines 59-67]**, comprising:

providing, for each of the plurality of different target *media*, a plurality of communication element types, each communication element type being *a user-definable data structure that pertains to* a particular protocol layer of the respective target communication medium, **[the user-defined data structure is interpreted as the programmably configurable protocol descriptions which allow changes to existing protocols and supports new protocols to be added, col. 2, lines 53-59; any possible organization of fields for any possible protocol, col. 7, lines 17-20]**.

wherein at least one of the plurality of communication element types is included by reference in greater than one other of the plurality of communication element types **[this is inherent in a system that parses frames and breaks them up into individual protocols and fields necessary for filtering, gathering statistics, generating network traffic, routing data, verifying field values (col. 2, lines 1-5); for example, this is interpreted as the system (1) receiving and determining the next protocol description structure to be used (table 4, lookup structure record, col. 8, lines 35-53) (reference to the message type—claim 20), then (2) finding the fields that describe the protocol header (table 1, protocol control record, col. 7, lines 24-46) (reference to the word type—claim 20), and then (3) computing the protocol checksum (table 6, checksum record, col. 9, lines 10-20 (reference to the field type—claim 20); *see also* this process is described in flowchart format: Fig. 11, PARSEFRAME 100, GET CURRENTPROTOCOL 102, then PARSEFIELDS 132, then Fig. 13A, PARSEFIELDS 200, then Fig. 13B, VERIFY CHECKSUM 235]**.

4. With regard to claim 2, Baker et al. discloses that instances of each communication element type can be created for exchanging data on the respective target medium **[can be configured and reconfigured to implement data manipulation functions and accommodate substantial network (bus) modification, col. 2, lines 59-67]**.

5. With regard to claim 3, Baker et al. discloses defining the plurality of communication element types responsive to exchanges allowed by the protocol of the respective target medium **[it is inherent that the communication element types would be defined; *see also* one or more programmable configurable program descriptions, col. 2, lines 50-52]**.

6. With regard to claim 4, Baker et al. discloses creating an instance of at least one of the plurality of communication element types **[the system can perform data manipulation, i.e., the logic control module can perform data manipulation, e.g., parsing, filtering, and analysis, col. 2, lines 50]**; and

processing the instance of the communication element type for exchanging information on the respective target medium **[logic module 16 processes the program description files and extracts field values or filtered values, col. 6, lines 15-19]**.

7. With regard to claim 5, Baker et al. discloses that the communication element type defines a structure for transmitting data over the target medium **[logic control module 16 supports the configuration/reconfiguration of the programmably configurable protocol descriptions to handle different transmission hardware, protocols, and suites (in order to transmit data over that different transmission hardware, protocol, or suite), col. 2, lines 59-67]**.

8. With regard to claim 6, Baker et al. discloses that the communication element type defines a structure for receiving data over the target medium **[logic control module 16 supports the configuration/reconfiguration of the programmably configurable protocol descriptions to handle different transmission hardware, protocols, and suites (in order to receive data over that different transmission hardware, protocol, or suite), col. 2, lines 59-67]**.

9. With regard to claim 7, Baker et al. discloses that at least one communication element type is a message type that includes a portion for holding message data associated with instances of the respective message type **[a data file 20 includes a protocol record organized into a plurality of predefined fields, col. 6, lines 64 to col. 7, lines 1; and can be organized to be used with any possible protocol, col. 7, lines 17-20]**.

10. With regard to claim 8, Baker et al. discloses that the message data has a fixed length **[e.g., for example, a particular protocol header length may be fixed, col. 7, lines 3-7]**.

11. With regard to claim 9, Baker et al. discloses that the message data has a variable length **[a data file 20 includes a protocol record organized into a plurality of predefined fields, col. 6, lines 64 to col. 7, lines 1; and can be organized to be used with any possible protocol, col. 7, lines 17-20]**.

12. With regard to claim 10, Baker et al. discloses that the communication element type has a fixed portion that is the same for all instances of the communication element type **[e.g., for example, a particular protocol header length may be fixed, col. 7, lines 3-7]**.

13. With regard to claim 11, Baker et al. discloses that any communication element type can be defined in terms of other communication element types **[defining the overall structure of the network protocol and reference other information (e.g., other protocols) relative to that network protocol, col. 7, lines 24-27]**.

14. With regard to claim 12, Baker et al. discloses that the plurality of communication element types includes at least one message type, and each instance of the message type includes a portion for prescribing timing **[it is inherent that a logic module's programmable configurable protocol which supports any protocol would also support a time-based or timing message]**.

15. With regard to claim 13, Baker et al. discloses that the timing includes a setting for specifying a pre-message gap **[it is inherent that a logic module's programmable configurable protocol which supports any protocol would also support a message gap; especially in light of the flexibility to rearrange frames and aligning memory accesses to RISC architectures, col. 15, lines 61-67]**.

16. With regard to claim 14, Baker et al. discloses that the timing includes a setting for specifying a pre-word gap **[it is inherent that a logic module's programmable configurable protocol which supports any protocol would also support a pre-word gap; especially in light of the flexibility to rearrange frames and aligning memory accesses to RISC architectures, col. 15, lines 61-67]**.

17. With regard to claim 15, Baker et al. discloses that the timing includes a setting for specifying a begin message timeout **[it is inherent that a logic module's programmable configurable protocol which supports any protocol would also support a message timeout; especially in light of the flexibility to rearrange frames and aligning memory accesses to RISC architectures, col. 15, lines 61-67]**.

18. With regard to claim 16, Baker et al. discloses that the timing includes a setting for specifying a trailing gap **[it is inherent that a logic module's programmable configurable protocol which supports any protocol would also support a trailing gap; especially in light of the flexibility to rearrange frames and aligning memory accesses to RISC architectures, col. 15, lines 61-67]**.

19. With regard to claim 17, Baker et al. discloses a method of structuring communications over a communication medium having a known protocol, comprising:

providing at least one user-definable communication element type for at least one layer of a generalized communication model, each communication element type having a user-definable structure that *pertains to* a corresponding layer of the protocol **[the logic control module can perform a plurality of functions such as data manipulation, e.g., parsing, filtering, and analysis, col. 2, lines 50; programmably configurable protocol descriptions allows changes to existing protocols and supports new protocols to be added, col. 2, lines 53-59; any possible organization of fields for any possible protocol, col. 7, lines 17-20]**.;

creating an instance of the at least one user-definable communication element type **[creating a programmably configurable general protocol description, col. 5, lines 18-21]**; *and*

varying at least one characteristic of the instance to determine susceptibility of equipment operatively connected to the target medium to the varied characteristic **[this is interpreted as determining (testing) dynamic/varying individual field values (e.g., using filtering control logic) and generating traffic with the ability to specify the methods for varying individual field values, col. 4, lines 44-49; thus, after entering the criteria to be tested/filtered, the control logic computes the validity, col. 18, lines 1-25; *see also* filtering criteria can be specified to any subset of bits in any field by allowing the criteria to be applied to every instance of that field which appears more than once in a frame, col. 18, lines 55-60].**

20. With regard to claim 18, Baker et al. discloses a method as recited in claim 17, wherein *the at least one characteristic includes a timing characteristic* **[it is inherent that a logic module's programmable configurable protocol which supports any protocol would also support a time-based or timing message].**

21. With regard to claim 19, Baker et al. discloses a method of creating an interface with a communication medium having a protocol, comprising:

creating *a plurality of* user-definable communication element *types* for *representing different layers* of a generalized communication model **[the logic control module can perform a plurality of functions such as data manipulation, e.g., parsing, filtering, and analysis, col. 2, lines 50; the user-defined data structure is interpreted as the programmably configurable protocol descriptions which allow changes to existing protocols and supports new protocols to be added, col. 2, lines 53-59; any possible organization of fields for any possible protocol, col. 7, lines 17-20]**,

wherein at least one of the plurality of communication element types is included by reference in greater than one other of the plurality of communication element types **[this is inherent in a system that parses frames and breaks them up into individual protocols and fields necessary for filtering, gathering statistics, generating network traffic, routing data, verifying field values (col. 2, lines 1-5); for example, this is interpreted as the system (1) receiving and determining the next protocol description structure to be used (table 4, lookup structure record, col. 8, lines 35-53) (reference to the message type—claim 20), then (2) finding the fields that describe the protocol header (table 1, protocol control record, col. 7, lines 24-46) (reference to the word type—claim 20), and then (3) computing the protocol checksum (table 6, checksum record, col. 9, lines 10-20 (reference to the field type—claim 20); see also this process is described in flowchart format: Fig. 11, PARSEFRAME 100, GET CURRENTPROTOCOL 102, then PARSEFIELDS 132, then Fig. 13A, PARSEFIELDS 200, then Fig. 13B, VERIFY CHECKSUM 235]**; and

saving the at least one user-definable communication element type in a computer readable format that can be accessed for communicating over the medium **[written and saved in PDF format, col. 10, lines 51-58]**.; *and*

instantiating one or more of the plurality of communication element types to create specific instances of communications over the communication medium **[this is interpreted as generating traffic with the ability to specify the methods for varying individual field values, col. 4, lines 44-49; *see also* specific instances of communications using the system: Fig. 11, running PARSEFRAME 100, running PARSEFIELDS 130/132, Fig. 12, running PARSEPROTOCOL 150, and Fig. 13A running PARSEFIELDS 200]**.

Response to Arguments

22. Applicant's arguments filed February 3, 2006 have been fully considered but they are not persuasive.

23. With respect to claims 1 and 19, Applicant's representative argues that Baker et al. does not disclose, teach, or suggest a user-definable data structure **[Applicant's Amendment of February 3, 2006, page 3, lines 20-21; page 5, lines 32-33]**. Applicant states that Baker et al. discloses a fixed table and can only plug in values into a fixed table **[Applicant's Amendment of February 3, 2006, page 3, lines 26-27]**. On the other hand, Applicant's representative argues, the current invention is not limited to the structure of a table **[Applicant's Amendment**

of February 3, 2006, page 3, line 30; page 5, lines 26-31]. The examiner respectfully disagrees.

24. As stated for rejected claims 1 and 19 above, the user-defined data structure is interpreted as the programmably configurable protocol descriptions, which allow changes to existing protocols and supports new protocols to be added (col. 2, lines 53-59). Baker et al. further discloses that any possible organization of fields for any possible protocol **(col. 7, lines 17-20)**.

25. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., not limited to the structure of a table) are not recited in the rejected claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

26. With respect to claims 1 and 19, Applicant's representative further argues that none of the tables of Baker et al. are referenced by more than one other table **[Applicant's Amendment of February 3, 2006, page 3, lines 35-37]**. The examiner respectfully disagrees.

27. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., at least one table which is referenced by more than one other table) are not recited in the rejected claim. Although the claims are interpreted in light of the specification, limitations from the specification

are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

28. Amended claims 1 and 19 recite: *wherein at least one of the plurality of communication element types is included by reference in greater than one other of the plurality of communication element types.* As stated for the rejection of claims 1 and 19 above, this is inherent in a system that parses frames and breaks them up into individual protocols and fields necessary for filtering, gathering statistics, generating network traffic, routing data, verifying field values (col. 2, lines 1-5). For example, the system of Baker et al. (1) receives and determines the next protocol description structure to be used **(table 4, lookup structure record, col. 8, lines 35-53)** then (2) finds the fields that describe the protocol header **(table 1, protocol control record, col. 7, lines 24-46)**, and then (3) computes the protocol checksum **(table 6, checksum record, col. 9, lines 10-20)**. This process is also described in flowchart format: Fig. 11, PARSEFRAME 100, GET CURRENTPROTOCOL 102, then PARSEFIELDS 132, then Fig. 13A, PARSEFIELDS 200, then Fig. 13B, VERIFY CHECKSUM 235. Thus, for example, the checksum is imbedded in the protocol header, which is imbedded within the protocol control record [derived from the received frame].

29. With respect to amended claim 17, Applicant's representative argues that the amended claim limitations (creating and varying a field characteristic to determine equipment operation) are not disclosed in Baker et al. **[Applicant's Amendment of February 3, 2006, page 5, lines 5-6]**. The examiner respectfully disagrees.

30. As stated for the rejection of amended claim 17 above, this is interpreted as determining (testing) dynamic/varying individual field values (e.g., using filtering control logic) and generating traffic with the ability to specify the methods for varying individual field values **(col. 4, lines 44-49)**. Thus, after the user/operator enters the criteria to be tested/filtered, the control logic computes the validity **(col. 18, lines 1-25)** and therefore, determines equipment operation (susceptibility to the filtered criteria). Baker et al. discloses how dynamic/robust this testing is by specifying that the filtering criteria can be applied to any subset of bits in any field in every instance of that field which appears more than once in a frame **(col. 18, lines 55-60)**.

31. With respect to claim 19, Applicant's representative argues that Baker et al. does not disclose that the tables of Baker et al. are not instantiated, but, rather, records to be filled in **[Applicant's Amendment of February 3, 2006, page 6, lines 2-3]**. The examiner respectfully disagrees.

32. As stated for the rejection of claim 19 above, instantiating the communication element types is interpreted as generating traffic with the ability to specify the methods for varying individual field values, **(col. 4, lines 44-49).** This process is also described in flowchart format: Fig. 11, running PARSEFRAME 100, running PARSEFIELDS 130/132, Fig. 12, running PARSEPROTOCOL 150, and Fig. 13A running PARSEFIELDS 200. Thus, each one of the Parsing functions runs (instantiates) the different protocol elements. For example, after the

user/operator enters the criteria to be tested/filtered, the control logic computes the validity **(col. 18, lines 1-25)** and therefore, creates a specific instance of a communication over the bus.

Conclusion

33. Accordingly, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Cooledge et al. (USP 5,11,450), Data Bus Tester for Autonomous Data Communication System.

(b) Dabral et al. (USP 6,601,196), Method and apparatus for debugging ternary and high speed buses.

(c) Carlton (US Patent Application 2003/0056036), Apparatus and Method for Testing Universal Serial Bus Communication.

35. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is (571) 272-3138. The examiner can normally be reached on 6:00-4:30.

37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

38. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

39. Applicant is hereby informed/reminded that Technology Center 2600 has reorganized. Examiner's previous Group Art Unit 2664 is now designated as Group Art Unit 2616. Group Art Unit 2616 still examines Class 370 (multiplexing).

Seema S. Rao 4/3/06
SEEMA S. RAO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

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March 2, 2006